

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (Currently Amended) A method of semiconductor device isolation, which comprises the steps of:

providing a semiconductor substrate where a device isolation region was defined;

forming a mask on the substrate in such a manner that the device isolation region is exposed through the mask;

etching the substrate using the mask to form a trench;

thermally treating an inner wall of the trench using the mask under a hydrogen atmosphere;

forming a first insulating layer covering the resulting inner wall of the trench, wherein the first insulating layer is formed using an epitaxial growth process;

forming a second insulating layer on the mask in such a manner that the second insulating film covers the first insulating film;

firstly etching the second insulating layer to expose a surface of the mask;

removing the mask;

secondly etching the remaining second insulating layer until a surface of the substrate is exposed, thereby forming a device isolation film.

2. (Original) The method of Claim 1, in which the thermal treatment is carried out at a temperature of 600 °C to 1300 °C.

3. (Canceled)

4. (Original) The method of Claim 1, in which the first and second etching steps for the second insulating layer are carried out using a chemical mechanical polishing (CMP) process or an etch back process.

5. (Currently Amended) A method of semiconductor device isolation, which comprises the steps of:

providing a semiconductor substrate where a device isolation region was defined;

successively forming a buffer oxide film and a silicon nitride film on the substrate;

forming a photoresist pattern on the silicon nitride film in such a manner that the device isolation region is exposed through the photoresist pattern;

etching the silicon nitride film, the pad oxide film and the substrate using the photoresist pattern as a mask to form a trench;

removing the photoresist pattern;

thermally treating an inner wall of the trench under a hydrogen atmosphere using the remaining silicon nitride film as a mask;

forming an ~~epi-layer~~ epitaxial layer covering the resulting inner wall of the trench;

forming an insulating layer on the remaining silicon nitride film in such a manner that the insulating layer covers the ~~epi-layer~~ epitaxial layer;

firstly etching the insulating layer to expose a surface of the remaining silicon nitride film;

removing the remaining silicon nitride film;

secondly etching the remaining insulating layer until a surface of the substrate is exposed, thereby forming a device isolation film.

6. (Currently Amended) The method of Claim \pm 5, in which the thermal treatment is carried out at a temperature of 600 °C to 1300 °C.

7. (Currently Amended) The method of Claim \pm 5, in which the first and second etching steps for the insulating layer are carried out using a chemical mechanical polishing (CMP) process or an etch back process.